

**Draft**  
**July 28, 2003**  
**Standard Operating Procedure**  
**For**  
**Road Sampling**  
**At the**  
**Herculaneum Lead Smelter Site, Herculaneum, MO**

Equipment Used

HEPA Vacuum VACOMEGA  
Dust Collection Sample Filter  
Inlet Nozzle 1.245" x 4"  
Power Inverter 1000/2000 Watt  
24 feet of Battery Wire Cable  
Vehicle and Battery to Supply Power

Model # 950-AI-00-120  
Part No. FAB-07-03-006PS  
Part No. 924-MV-18-004N

6 gauge

Setup

1. Equipment is gathered and the vehicle is prepared for sampling.
2. The 24 foot Battery Wire Cable is connected to the vehicle battery, run over the top of the vehicle and through the rear driver side window.
3. The Battery Wire Cable is connected to the Power Inverter.
4. The VACOMEGA's power is turned on to assure that the vacuum is functioning properly.

Filter Preparation

At each sampling location, one new pre-weighed Dust Collection Sample Filter and Inlet Nozzle are used. At the open end of the vacuum hose, a filter is folded and inserted into the open end of the vacuum hose. The blue sides of the filter are rolled down so the paper portion of the filter is even with the top hose. The inlet nozzle is then inserted over the end of the vacuum hose to secure the filter.

Sample Location

At each known sampling location, the vehicle is parked facing the direction of oncoming traffic and the vehicle remains running while the sample is taken. With the known recorded filter loaded in the vacuum hose the vacuum is switched on to collect the sample. The 3 feet by 3 feet sample area is then vacuumed one time over to pick up all road dust that has settled in the sample area. At the end of the sampling, the vacuum nozzle is turned upright (so the filter is turned upright) and the power is turned off. The inlet nozzle is taken off and the filter is pulled out of the vacuum hose. The filter is then rolled up and placed into its properly labeled sample container.

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Superfund

This procedure is completed at each sampling location. At the end of each sampling event, samples are recorded in the sample management book, labeled, and chains of custody are completed for shipment to the laboratory

At the Laboratory, EPA SW-846 Method 3050B is used in the digestion process. Analysis is completed by inductively coupled argon plasma spectrometry - mass spectrometry (ICP-MS) using EPA SW-846 Method 6020A. The units reported by the laboratory are in milligrams per kilogram (ppm), and since the hepa filters are pre-weighed, units are also reported in milligrams per square foot.